REMARKS/ARGUMENTS

Claims 21-28, 31-38and 41-44 are active. Independent Claims 21, 43 and 44 now refer to cells in which the spindle polypeptide is α-tubulin and β-tubulin. Support is found at the bottom of page 19 of the specification, see (4). Other editorial revisions have been made to improve the clarity of these claims. Accordingly, the Applicants do not believe that any new matter has been added.

The Applicants thank Examiners Dunston and Qian for confirming that the above amendments would be considered upon filing an RCE and that they would address the prior art rejections of record.

Election/Restriction

The Applicants previously elected Group I, Claims 1-10, directed to cell-division visualized cells containing three or more genes encoding fluorescent fusion proteins. As species of fusion proteins, the Applicants previously elected from Claim 3 histone H3 (a nucleus/chromosome protein) and importin α (a nuclear membrane protein) and the corresponding classes of proteins chromosome and nuclear membrane from Claim 2. The present specification of a fusion protein containing a spindle protein (i.e., α-tubulin or β-tubulin) does not affect the prior restriction requirement. It is understood that examination will be extended to additional species upon an indication of allowability for a generic claim.

Claims 43-44 have been withdrawn from consideration and generally track non-elected Groups II and III. In the event that this restriction requirement is maintained, the Applicants respectfully request that the claims of the nonelected group(s) which depend from or otherwise include all the limitations of an allowed elected claim, be rejoined upon an indication of allowability for the elected claim, see MPEP 821.04.

Rejection—35 U.S.C. §112, second paragraph

Claims 29, 39 and 40 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. This rejection is moot in view of cancellation of these claims.

Rejection—35 U.S.C. §102

Claims 21-30 and 39-42 were rejected under 35 U.S.C. 102(b) as being anticipated by Sugimoto et al., Mol. Biol. Cell 13:50a-51a.

The Applicants respectfully submit that the cited prior art is not applicable under 35 U.S.C. 102(b) or under 35 U.S.C. 102(a) for the reasons set forth in the last response.

Moreover, this rejection is moot since Sugimoto does not disclose cells which express the fusion proteins of the present invention which include histone H3 (a nucleus/chromosome protein), importin α (a nuclear membrane protein), and α-tubulin or β-tubulin (spindle polypeptides). Rather, the Sugimoto abstract describes cells expressing an Aurora-A kinase fusion protein (in addition to histone H3 and importin α). Aurora-A is a centrosome protein, see the specification page 19, bottom, (3).

Rejection—35 U.S.C. §102

Claims 21-23, 25, 27-29, 39, 41, and 42 were rejected under 35 U.S.C. 102(b) as anticipated by Gerlich et al., Nature Cell. Biol. 13:852, as evidenced by Oakley et al., Cell Structure and Function 24:365. This rejection is moot since Gerlich does not disclose cells which express the fusion proteins of the present invention which include histone H3 (a nucleus/chromosome protein), importin α (a nuclear membrane protein), and α-tubulin or β-tubulin (spindle polypeptides).

Gerlich does not disclose cells transformed with fusion proteins containing a spindle polypeptide. Gerlich employs fusion proteins not containing spindle polypeptides: γ-tubulin (a centrosome polypeptide, see page 19, line 21 of the specification), histone H2B (nucleus/chromosome) and LBR (nuclear membrane)—see Fig. 2, legend, on page 853 of Gerlich.

Moreover, with respect to potential obviousness issues, Gerlich does not suggest a cell expressing a fluorescent spindle protein that permits visualization of the spindle apparatus. Gerlich's objective was only watching a co-action between nucleus and nuclear membrane, see page 853, col. 2, line 9-*et seq*. On the other hand, the previously-attached figure shows the comparative effects of using or not using a fusion protein comprising a spindle polypeptide are shown in the previously-attached figure. Using the Gerlich cells it is not possible to observe the dynamic state of the spindle during the mitotic period--compare (a-3) to (a-5) with (b-3) to (b-5). Thus, unlike the present invention, Gerlich does not suggest a cell expressing a fusion protein that permits visualization of the spindle apparatus.

Accordingly, the Applicants respectfully request the withdrawal of this rejection.

CONCLUSION

The Applicants submit that this application is now in condition for allowance in view of the above amendments and remarks. Early notice to that effect is earnestly solicited.

Respectfully submitted,

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